

# **Kennedy Industrial Wastewater Inventory**

## **General Conditions and Ground Rules for All Discharges**

1. There will be no discharges directly to surface waters.
2. There will be no discharges directly to storm water conveyance systems.
3. All discharges will be directed to grade or a “Department approved” facility.
4. Discharges to grade will cause no erosion.
5. Discharges to grade will not indirectly run-off to surface waters.
6. Exceptions to the above conditions/rules will be per specific approval of the Department.

## **Category A Exemption – No Inventory Required**

### **1. Surface Cleaning/Washing and Water/Wet Blasting Operations**

Water washing and water/wet blasting operations for surface cleaning of buildings, fixed structures, Mobile Launch Platform (MLPs), non-wheeled gaseous tube banks (MSU). Frequency is to be no more than once per year for buildings/structures, once per launch flow for MLPs and once per six month period for MSU.

### **2. Mobile Containers and Temporary Tanks**

Containers and tanks used only for temporary collection and storage of industrial wastewater prior to disposal to a Department approved treatment or recycle facility. Temporary is defined as less than 180 days per site or function, not per tank or container. There is no discharge or treatment of the wastewater.

### **3. Containers and Tanks in collection systems, work area units ( $\leq 55$ gals)**

Containers and tanks used only for storage of industrial wastewater at a specified work area prior to removal to a primary holding area or disposal to a Department approved treatment or recycle facility. There is no discharge or treatment of the wastewater.

### **4. Leak/hydrostat testing of vessels ( $\leq 5000$ gals)**

Leak and hydrostatic testing of vessels having no contaminants. Effluent will be discharged to grade. Frequency requirement per vessel is typically no more than once per year.

### **5. Minor Groundwater Discharges ( $\leq 1000$ gpd, potable water, drinking water standards)**

#### **a. Eyewash and Safety Showers**

Test and flow verification discharges of safety apparatus used for emergency situations. Effluent will be discharged to grade or a “Department approved” facility (i.e. STPs).

#### **b. SCAPE personnel rinse operation**

Routine rinse of personnel during and following SCAPE operations. Effluent will be discharged to grade or a “Department approved” facility (i.e. STPs).

**c. Facility Freeze Protection Activations**

Flows performed for the protection of water systems from freezing conditions. Activations (manual and automatic) are based on predicted conditions of 32 degrees F or below for 4 hours or more. For areas that are impractical to discharge to grade, effluent may be discharged to a ditch or swale that is isolated from or does not discharge directly to surface water.

**d. Chlorine Analyte Discharge**

Potable water used for the calibration of the KSC distribution system's chlorination. Analyzer discharges sample water into a holding tank. Holding tank discharges to grade.

**6. Minor Groundwater Discharges (> 1000 gpd, potable water, drinking water standards)****a. Emergency Response Vehicle Wash**

Emergency response vehicle maintenance washing at designated/approved sites with either potable water only or potable water used with "packaged for sale to residential households" type cleaning solutions (i.e. dishwashing soaps, car care soaps etc.). Frequency is to be no more than once per week per vehicle. KSC will inventory to determine what types of cleaning solutions are currently used and develop a BMP with a limited number of "department approved" chemicals for use at KSC.

**b. Facility Fire Protection System Testing/Maintenance**

Flushing and test discharges for facility fire protection/safety systems consisting of potable water with no chemical (fire fighting or other) additives. For areas that are impractical for discharge to grade, effluent may be discharged to a ditch or swale that is isolated from or does not discharge directly to surface water.

**c. Potable water system flushing**

Flushing of water lines to ensure drinking water standards are maintained (i.e. chlorine residual). Effluent will be directed to grade wherever possible. For areas that are impractical for discharge to grade, effluent may be discharged to a ditch or swale that is isolated from or does not discharge directly to surface water. Frequency is to be on an as required basis for maintenance of compliance with drinking water regulations.

**d. Fire System flushing**

Flushing of fire hydrants, hose bibs and accumulators for safety inspection, flow verification and maintenance. Effluent will be directed to grade wherever possible. Frequency is to be no more than once per 6 months per site. For areas that are impractical for discharge to grade, effluent may be discharged to a ditch or swale that is isolated from or does not discharge directly to surface water.

**e. LOX Vaporization Pit Discharges**

Groundwater used to vaporize liquid oxygen during LOX storage tank pressurization. Effluent is discharged to the stormwater system that does not discharge to waters of the state. Flows occur during pre-launch operations, launch countdown and for test/validation.

**f. Off-Spec Demineralized Water Discharges**

Minor groundwater discharges of off-spec demineralized, de-ionized water meeting drinking water standards.

**7. Temporary Environmental Control Systems/Heating, Ventilation, Air Conditioning Systems (ECS/HVAC) Condensate**

ECS/HVAC systems used on a temporary basis. Temporary is defined as less than 180 days per site or function. Condensate water with no additives or contaminants. Effluent may be discharged to grade.

**8. ECS/HVAC Condensate (with no chemical additives)**

Condensate water with no additives or contaminants. Effluent may be discharged to grade.

**9. Cooling Towers, Zero Discharge**

Zero discharge cooling towers with permanent overflow/relief to sewer. No relief or overflow to grade is allowed. Zero discharge is defined as having no release to either surface water or groundwater and all blowdown generated is discharged to a Department-approved treatment or recycle facility by permanent hardline connection.

**10. Temporary Air Compressor and Air Dryer Condensate ( $\leq$  500 gallons per week (gpw),  $<10$  mg/l oil)**

Condensate water with no additives. Discharge is to be less than 500 gpw per unit and must have less than 10 mg/l oil content. Temporary is defined as less than 180 days per site or function. Effluent may be discharged to grade or "Department approved" facility.

**Category B: Exemption – Inventory Required**

**1. Air Compressor and Air Dryer Condensate ( $\leq$  500 gpw,  $<10$  mg/l oil)**

Condensate water with no additives. Discharge is to be less than 500 gpw per unit and must have less than 10 mg/l oil content. Effluent may be discharged to grade or "Department approved" facility.

**2. Containers and Tanks in collection systems, primary holding areas units, secondary containment ( $>55$  gals)**

Containers and tanks with secondary containment used only for collection and storage of industrial wastewater prior to disposal to a Department approved treatment or recycle facility. There is no discharge or treatment of the wastewater.

**3. Minor Groundwater Discharges ( $\leq$  1000 gpd, potable water, drinking water standards)**

**a. Non-contact cooling water:**

Discharge of cooling water used in systems that have no possibilities of the process or processes contaminating the cooling water. Temperature at discharge point must be no greater than 40 degree C to reduce environmental impact due to thermal pollution.

## **Category C: A Formal De Minimis Exemption Required – Inventory**

### **1. ECS/HVAC Condensate ( $\leq$ 5000 gpd per unit, with trace amounts from algaecide/ standard commercial pathogen suppressing substances)**

Condensate water with no additives or contaminants except trace amounts from “Department approved” algaecide or standard commercial pathogen suppressing substances. Effluent must be discharged to grade. KSC will inventory to determine what types of chemicals are currently used and develop a BMP with a limited number of “Department approved” chemicals for use at KSC. This class will require a case-by-case evaluation for permitting or exemption.

### **2. Containers and Tanks in collection systems, primary holding areas units, no secondary containment ( $>55$ gals)**

Containers and tanks without secondary containment used only for collection and storage of industrial wastewater prior to disposal to a Department approved treatment or recycle facility. There is no discharge or treatment of the wastewater. This class will require a case-by-case evaluation for permitting or exemption.

### **3. Minor Groundwater Discharges ( $>1000$ gpd, potable water, drinking water standards)**

#### **a. Non-contact cooling water**

Discharge of cooling water used in systems that have no possibilities of the process or processes contaminating the cooling water. Temperature at discharge point must be no greater than 40 degree C to reduce environmental impact due to thermal pollution. This class will require a case-by-case evaluation for permitting or exemption.

#### **b. Proofload Sphere, Draining of:**

Draining of the water contained in the 250 ton proofload sphere.

### **4. Sumps, Fuel/Oxidizer Containment Stormwater (OCD-IW-93-0614)**

Discharge of stormwater from sumps in fuel/oxidizer containment areas at specific sites. Effluent is to consist of stormwater only and be verified free from any fuel/oxidizer residuals prior to release to stormwater system. Frequency is to be on an as required basis. Note: this exemption already exists and is included for completeness.

### **5. Secondary Containment systems Stormwater**

Discharge of stormwater accumulated in secondary containment systems at specific sites. Effluent is to consist of stormwater only and be verified free from any contaminants prior to release to stormwater system. Frequency is to be on an as required basis. Note: a similar exemption exists for fuel/oxidizer areas.

### **6. Utility Tunnels, Duct Banks, Valve Pit Dewatering**

Removal of water (ground and storm water infiltration) from utility tunnels, duct banks and valve pits for maintenance purposes. Water is not to be process water of any type, only ground water or stormwater intrusion. Frequency is to be on an as required basis.

**Category D: Inventory/Permit**

**1. Air Compressor and Air Dryer Condensate (>500 gpw, >10 mg/l oil) :**

Condensate water with no additives.

**2. ECS/HVAC Condensate (>5000 gpd, with or without trace amounts from algaecide/ standard commercial pathogen suppressing substances)**

Condensate water with no additives except trace amounts from algaecide or standard commercial pathogen suppressing substances.

**3. Non-contact cooling water, contamination**

Discharge of cooling water used in systems that have been determined to contaminate the cooling water.

**4. Recycling Systems, no overflow/relief to sewer**

Non-hazardous wastewater treatment systems with intended reuse of water into the process that created the wastewater. Systems with no permanent overflow/relief to sewer.

**5. LC-39A/B Post Launch Washdowns**

Post launch contamination removal washdown of facility systems. Washdown must consist of only potable water per drinking water standards and detergents identified in the permit.

**6. Other items that do not fit Class A, B, or C and require permits per F.A.C.**

**Category E: Exemptions by Rule - Inventory (Requested by NASA)**

**1. Recycle systems, Zero Discharge**

Zero discharge recycle systems with permanent overflow/relief to sewer. No relief or overflow to grade is allowed. Zero discharge is defined as having no release to either surface water or groundwater and all effluent generated for disposal is discharged to a Department-approved treatment or recycle facility by permanent hardline connection.

Other Exemptions

Special Purpose Vehicle Wash Facility – OCD-IW-95-0553